

PE178 *Gardnerella vaginalis* virulence potential outcompetes with 30 other microorganisms isolated from BV patients

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Bacterial vaginosis (BV) is the most common vaginal disorder affecting millions of women every year, and is usually associated with several adverse health outcomes, including preterm birth and acquisition of sexually transmitted diseases. However, the etiology of BV is still under debate. Recently, new fastidious anaerobic bacteria have been associated with BV, but there are very few studies that comprehensively evaluate the virulence potential of these microorganisms, mainly due to difficult growth conditions. However, in order to find answers to some of the questions related to BV, isolation and characterization of such bacteria will be required. In this work, samples of vaginal exudate from BV women were collected and 31 different microorganisms were isolated, including 6 novel species never described in BV before. Each microorganism was characterized for their ability to adhere to HeLa epithelial cells and cause cytopathogenic changes; their intrinsic biofilm-forming capability; and finally their antimicrobial susceptibility tests for antibiotics commonly used in the treatment of BV. Despite the strong evidence that *G. vaginalis* outcompeted the other species in the defined virulence assays, our results also demonstrate that other bacteria showed significant biofilm-forming capability, but not initial adhesion, such as *Actinomyces turicensis* and *Corynebacterium tuscaniense*. This work supports the evidence that *G. vaginalis* is the main colonizer in multi-species related BV and further describes novel microorganisms with enhanced virulence potential. Finally, this is the first characterization of Portuguese microbiota associated with BV.